

India

DISCOVERY SERIES



MANUAL



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Document authored by: Adam Hanley, Antriksh Bali, Nikolas Jeroma

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NATIVE INSTRUMENTS GmbH

Schlesische Str. 29-30
D-10997 Berlin
Germany
www.native-instruments.de

NATIVE INSTRUMENTS North America, Inc.

6725 Sunset Boulevard
5th Floor
Los Angeles, CA 90028
USA
www.native-instruments.com

NATIVE INSTRUMENTS K.K.

YO Building 3F
Jingumae 6-7-15, Shibuya-ku,
Tokyo 150-0001
Japan
www.native-instruments.co.jp

NATIVE INSTRUMENTS UK Limited

18 Phipp Street
London EC2A 4NU
UK
www.native-instruments.com



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1 Welcome to DISCOVERY SERIES: INDIA

Thank you for purchasing DISCOVERY SERIES: INDIA. On behalf of the Native Instruments team, we hope this new KONTAKT library truly inspires you.

DISCOVERY SERIES: INDIA adds a selection of exclusively sampled percussion and melodic instruments that integrate into the latest versions of KONTAKT 5 or the free KONTAKT PLAYER. These instruments have been carefully crafted to be both authentic and easy to use. Creating the atmosphere of an Indian musical ensemble is now as easy as it gets, even if you are not deeply familiar with the musical style.

This manual will introduce you to the different instruments that have been sampled for this collection, and explain how to use the KONTAKT instruments.

1.1 What is DISCOVER SERIES: INDIA?

Continuing Native Instruments' Discovery Series of sounds from around the world, DISCOVERY SERIES: INDIA is a collection of multi-sampled instruments from the respective region. Based on traditional techniques, this library is designed to add authentic Indian flavors to your music productions.

1.2 Document Conventions

This document uses particular formatting to point out special facts and to warn you of potential issues. The icons introducing the following notes let you see what kind of information can be expected:



The speech bubble icon indicates a useful tip that may often help you to solve a task more efficiently.



The exclamation mark icon highlights important information that is essential for the given context.



The red cross icon warns you of serious issues and potential risks that require your full attention.

Furthermore, the following formatting is used:

- Text appearing in (drop-down) menus (such as *Open...*, *Save as...* etc.) in the software and paths to locations on your hard disk or other storage devices is printed in *italics*.
 - Text appearing elsewhere (labels of buttons, controls, text next to checkboxes etc.) in the software is printed in **blue**. Whenever you see this formatting applied, you will find the same text appearing somewhere on the screen.
 - Important names and concepts are printed in **bold**.
 - References to keys on your computer's keyboard you'll find put in square brackets (e.g., "Press [Shift] + [Enter]").
- Single instructions are introduced by this play button type arrow.
- Results of actions are introduced by this smaller arrow.

2 The DISCOVERY SERIES: INDIA Library

The DISCOVERY SERIES: INDIA library is split into three main sections:

Ensemble

The India Ensemble is a single KONTAKT Instrument containing a number of percussion and melodic instruments that produce the sound of a full traditional Indian musical ensemble.

The Instrument contains patterns, single hits, and tonal notes. The entire MIDI key-range is filled with sounds.

Percussion

The Percussion Instruments each contain a single Indian percussion instrument, mapped in more detail than the India Ensemble. These instruments contain patterns, fills, and single hits.

Melodic

The Melodic Instruments each contain a single Indian melodic instrument. These instruments can be played normally, and include a number of ornaments (like slides) as well as a built-in Tanpura drone.

2.1 Included Instruments

2.1.1 Percussion

The following percussion instruments are included in this library:

Dhol



Most popularly played from Punjab through the entire North-Indian region of India. There are differing accounts on how and where the instrument originated: while one theory claims that instruments similar in build and shape to the dhol have been around for several centuries, another more plausible origin story attributes the introduction of the instrument to the presence of duhul, a 15th century Persian drum that was brought to India during the rule of the Mughals.

The dhol typically consists of a double sided barrel drum, with both of the skins being hit by sticks. While different variations and construction methods exist for the dhol, the most widely used is the Punjabi or 'Bhangra' dhol, which has a large and heavy body for producing loud bass. Bhangra is a common musical form that is widely played by 'Dholi' (dhol players), which is known for its energetic rhythms and danceable grooves. One can often hear the dhol in full form at Indian wedding ceremonies or in festival celebrations.

Dholak



The dholak is a double-sided drum, usually made up of wood. One side is known to have a thicker skin, while the other has a tightly stretched thin parchment which gives it a sharper tone. It is usually placed horizontally on one's lap and played with both hands and fingers. In some special cases, a spoon is used to tap on the center of the instrument in addition to the usage of hands.

The development and origin of the dholak is largely connected to the emergence of the dhol in Indian folk music. Being a derivative of the dhol, it is another instrument that is used far and wide in the North-Indian region. The dholak is typically used to provide minimal percussion in folk and spiritual music. It is most often heard during celebrations, important occasions, and festive days.

Ghatam



Ghatam is a South Indian percussive instrument dating back to ancient times. Having originated from clay pots or 'madgas' that were originally used to store water, yogurt and cooking materials, the ghatam eventually evolved into a musical instrument. The musical ghatam is built with thicker walls and a good tone, compared to a simple clay pot.

The ghatam is typically placed close to the player's body with its opening near the abdomen. The heels of the hand hit near the opening to provide bass sounds and finger-tapping is used to provide different treble sounds from different parts of the ghatam. Ghatam almost always accompanies and plays the same rhythm as the mridangam in an ensemble setting.

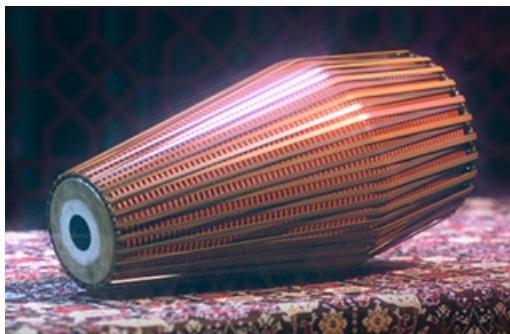
Kanjira



The kanjira is a secondary percussion instrument frequently used in Carnatic and South-Indian music. Being a member of the frame-drum family, the instrument first came to prominence around the late 19th century to the mid-20th century. Having been around for some time, the instrument has undergone a few changes over the years, eventually turning into the present form, similar to the western tambourine.

Being 8 to 10 inches in breadth and 2 to 3 inches in depth, the kanjira is small in size, which makes it the ideal percussive instrument to accompany the larger, more bass-heavy instruments like the mridangam. It consists of a drumhead made up of monitor lizard skin, and metal discs (jingles) that give it a shaker-like quality. Despite its size, the kanjira is known to be one of the toughest percussion instruments to play.

Khol



Originating in the north-eastern states of India, from West Bengal and Assam to Manipur, the khol is folk percussion instrument mainly used in Northern India. The instrument is widely famous for its almost-universal use by devotees of Lord Krishna. It is traditionally used in spiritual ceremonies like 'bhajans' and 'kirtans'.

The khol is a double-sided drum, similar in shape to mridangam, but with a smaller side that is one sixth the size of the larger side, and gives the drum its characteristic treble sound. The Khol is played in a similar fashion to the mridangam, with both hands and fingers. However, the khol also allows the player to modulate pitch while playing.

Mridangam



The mridangam is a percussion instrument that was originally used in Carnatic music. In Tamil culture, the instrument is also known by the name 'tannumai'.

The mridangam instrument is a close relative to its North Indian counterpart - the pakhawaj. However, the sound of the mridangam drastically varies from the sound of the pakhawaj due to differences in construction. The mridangam is mostly made of wood, except for the heads on either side of the drum, and it is tuned using a small wooden block and a heavy stone.

The mridangam is a key component of South Indian classical music and usually accompanies vocals, veena, or violin.

Pakhawaj



Pakhawaj is a North-Indian percussion instrument that can essentially be thought of as a descendant of the mridangam. It is typically played with both the right and left hand, and consists of a bigger side and a smaller side.

Coming to the forefront around the 14th century, the pakhawaj has faded much more into the background in recent times, with the tabla more or less replacing it in more recent compositions. However, the vivid bass tone that the Pakhawaj produces is still a common occurrence in spiritual gatherings and ceremonies.

Tabla



Said to have evolved hundreds of years ago from its South-Indian counterpart the pakhawaj, nothing else quite characterizes and personifies Indian classical music quite like the tabla. This percussive instrument forms the backbone of the rhythm section in any classical Indian music recital. However, the exact point of origin of the tabla is obscure at best.

The tabla is a percussion instrument consisting of two drums - the tabla and the bayan. The larger drum (bayan) is used to provide bass sounds, the pitch of which can be controlled using the heel of the hand, and the smaller drum (tabla) provides the various treble sounds.

2.1.2 Melodic

The following melodic instruments are included in this library:

Bansuri



The bansuri is a transverse flute made from a single hollow shaft of bamboo with six or seven finger holes. The word bansuri originates from the Sanskrit bans (bamboo) + sur (melody).

It is an ancient musical instrument associated with the pastoral tradition. The Bansuri is revered as Lord Krishna's divine instrument; mythological accounts tell of Krishna's flute having a spellbinding effect.

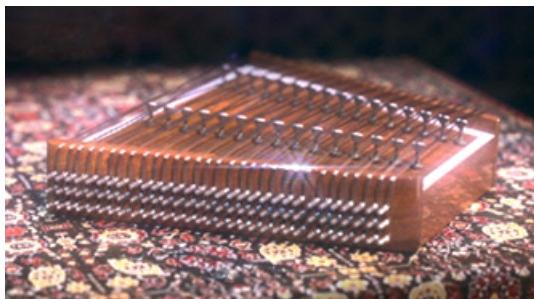
The North Indian bansuri, typically about 14 inches in length, was traditionally used as a soprano instrument primarily for accompaniment in lighter compositions. The bass variety (approximately 30 inches), has been indispensable in Hindustani Classical music for well over half a century. Bansuris range in size from less than 12 inches to nearly 40 inches.

Harmonium



The Indian harmonium is a descendant of the European harmonium, modified over the decades to better suit the practices of Indian music. It is played with the right hand while the left hand operates a bellow, supplying the air for producing tones. The Indian harmonium is used as an accompanying instrument for singers and solo tabla performances. In these cases, it plays a single melodic line which depicts the tala and raga.

Santur



The Indian santur (also spelled santoor) is a trapezoid shaped hammered dulcimer made of walnut, with seventy two metal strings, native to Jammu and Kashmir. In ancient Sanskrit Texts it has been referred to as shatatantri vina (100-stringed vina).

Traditionally, the santur is played while sitting, with the instrument resting on the players lap, the broad side facing the musician. It is played with a pair of light wooden mallets called mez-rabs.

Sitar



The sitar is a fretted plucked string instrument used widely throughout the Indian subcontinent. It derives its distinctive timbre and resonance from sympathetic strings, a long hollow neck, and a gourd-shaped resonance chamber. The lower strings, called the chikaari, provide a drone, and the higher strings are played melodically. The frets of the sitar can be adjusted, allowing for fine tuning of each interval.

The sitar is believed to have been derived from the veena, an ancient Indian instrument, which was modified by a Mughal court musician to conform to the tastes of his Mughal patrons and named after a Persian instrument called the setar (meaning 'three strings'). The sitar evolved through the 16th and 17th centuries and arrived at its present form in the 18th century. The instrument saw initial use in Western popular music by The Beatles and The Rolling Stones, beginning a trend for the use of the sitar in popular music, making it one of the most recognizable Indian instruments in the West.

Tanpura



The tanpura is a large, unfretted lute with 4 strings. The purpose of the tanpura is to produce a constant, non-rhythmic drone. In fact, in modern India, an electronic tanpura or a tanpura CD is often used to supply a steady drone during less formal occasions.

The name tanpura is derived from tana, referring to a musical phrase, and pura, which means 'full' or 'complete'. It is believed to have developed alongside the sitar, sharing a number of characteristics with the instrument.

Tumbi



The tumbi is a traditional North Indian musical instrument from Punjab. The high pitched, single string instrument is associated with folk music of Punjab and presently very popular in Western Bhangra music.

The instrument is made of a wooden stick mounted with a gourd shell resonator. A single metallic string runs the length of the instrument and is struck with the continuous flick and retraction of the fourth finger.

3 Using the Instruments

Although the exact features of the included instruments differ, there are many common elements that will be found in most, if not all, of the instruments. As such the controls of the instruments will be covered as one, with exceptions being pointed out along the way.

3.1 Shared Features

3.1.1 Navigation

All instruments contain two control pages, which are accessible from the tabs at the bottom of the instruments interface:

- **Instrument/Ensemble:** Contains the instrument options, a key-map, and the pattern controls. The name of this page will depend on the loaded instrument.
 - **Mixer:** Contains the mixer controls and effects.
- To open a control page, click on the respective tab.



3.1.2 Sound Presets

To the top right of all of the interfaces, you will see the Sound Presets menu.



The Sound Preset Menu

From here, you can browse through presets that affect the mix of the Instrument.

You can select a Sound Preset in one of two ways:

From the Menu

1. Click on the menu to view all available Sound Presets.



2. Click on a Sound Preset.

→ The Preset will be loaded and the sound of the Instrument will change.

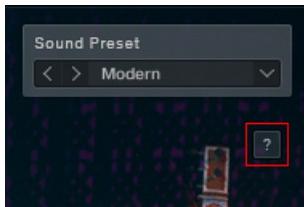
From the Cycle Buttons

- Click on the buttons to the left of the menu to cycle through the Sound Presets one at a time.



3.1.3 Mapping

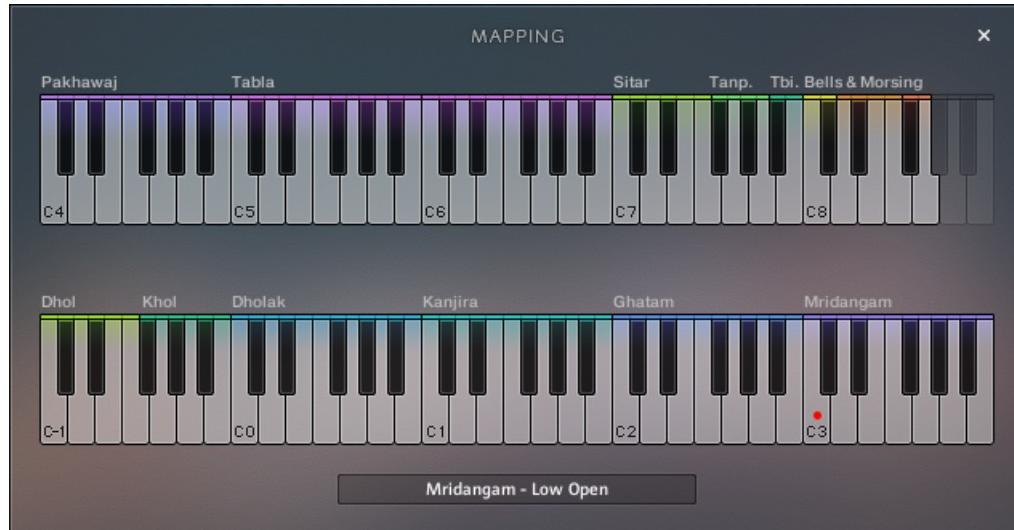
On the main Ensemble/Instrument page, below the Sound Presets, you will see a button with a question mark.



- Click on this button to open the Mapping Window.

The Mapping Window shows how the various articulations and patterns are arranged on the MIDI keyboard.

Ensemble and Percussion



The Mapping Window of the India Ensemble

For the Ensemble and Percussion Instruments, the window will show a full breakdown of how the different elements are mapped to the keyboard.

Below the keyboard is a small window that displays the name of the last played Instrument and Articulation.

The last played key will also be highlighted with a red dot on the virtual keyboard.

Melodic

For the Melodic Instruments, the window displays the available Key Switches.



The Mapping Window of the Sitar Instrument

A breakdown of the full keyboard is not required as these instruments are played melodically, with each key playing a different note of the same articulation. However, there are auto-scales built into the Melodic Instruments, which will be described in Section [13.5.2, Scales and Mapping](#) [13.5.2, Scales and Mapping](#).

Some instruments will have special sounds mapped to the black keys between the key switches. In the case of the sitar (shown above) these play the open strings of the instrument.



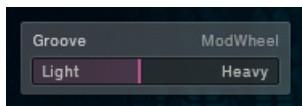
The tumbi is a unique case as the black keys are used to trigger traditional rhythmic patterns. The pitch of these patterns can then be changed by playing the main melodic keys.

3.1.4 ModWheel

The function of the MIDI ModWheel is relative to the Instrument type you have loaded:

- **Ensemble:** The ModWheel controls the groove intensity of the patterns.
- **Percussion:** The ModWheel controls the speed of the fills.
- **Melodic:** The ModWheel controls the speed of the ornaments.

For all Instrument types, the ModWheel has a display in the top left corner of the interface.



The ModWheel Display from the India Ensemble

This area not only shows the current value of the ModWheel, but can also be used to control the ModWheel from the interface, in case you are working without a MIDI controller.

3.2 Ensemble

The Main Ensemble Page is the first page you will see when you open the India Ensemble for the first time.



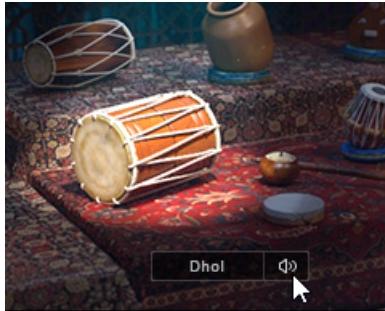
The India Ensemble Main Page

The main body of this page shows all of the instruments contained in the ensemble.

- Click on an instrument to highlight it.



- With an instrument highlighted, you will be able to see its name and also audition a pre-view of how it sounds.
- ▶ Click on the speaker icon beside the instrument name to hear an example sound from the instrument.



Using these options makes the India Ensemble a good place to browse the sounds on offer from the Percussion and Melodic sections of the library.

3.3 Percussion

The Main Instrument Page is the first page you will see when you open any of the Percussion Instruments for the first time.

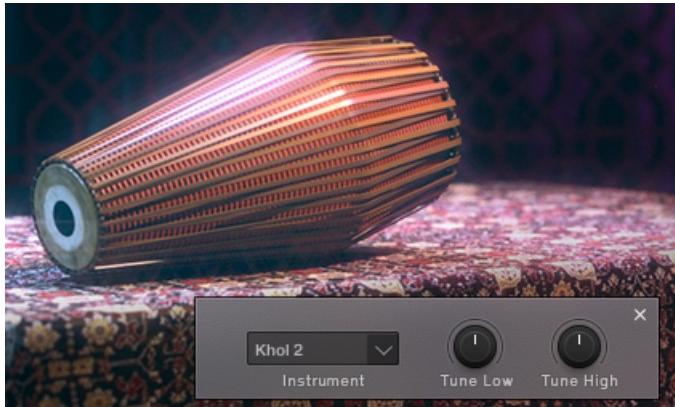


The Percussion Main Page

The main body of this page shows the instrument.

- Click on the instrument to display its options.

- The Instrument Options will appear in a window below the instrument.



The Instrument Options will contain between 2 and 4 controls, depending on which instrument you have loaded:

- **Instrument:** If more than one version of the instrument was sampled, you can select from the available sample sets using this menu. This option is not available for all Percussion Instruments.
- **Tune Low:** Controls the tuning of the lower sounds produced by the drum.
- **Tune High:** Controls the tuning of the higher sounds produced by the drum.



The dholak is an exception as it is split into two different KONTAKT instruments, rather than using the Instrument Options to switch between sample sets. This is because the two dholak are played by different musicians in different styles (one South-Indian, one North) and thus contain different articulations.

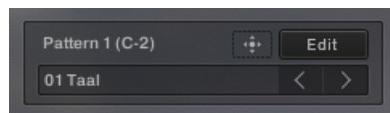
3.4 Patterns

In the Ensemble and Percussion Instruments, the lowest mapped octave (marked in red on the KONTAKT virtual keyboard) contains a selection of 12 patterns.

The features for the patterns are shared between the Ensemble and Percussion instruments, so the information here applies to both Instrument types.

3.4.1 Pattern Selection and Playback

The pattern selection is displayed in the central window in the lower section of the interface.

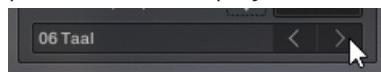


The Pattern Selection Window

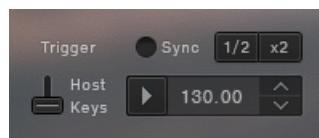
- ▶ Patterns can be selected by using the lowest mapped octave of MIDI keys (marked in red on the virtual keyboard).



- ▶ Alternatively, they can be selected by clicking on the arrow buttons to the right of the pattern name display.



The main options for pattern playback are located in the area to the left of the pattern selection display.



The Pattern Playback Controls

Here you will find a number of options that allow you to tailor how the patterns are played:

- **Trigger:** Selects between two trigger modes:
 - **Host:** The selected pattern will start when the host transport playback starts, and will stop when the host playback ends.

- **Keys:** The pattern selection key switches will also trigger the pattern playback. The pattern will play for as long as the key is held.
- **Sync:** Synchronizes the pattern to the host tempo.
- **1/2** and **x2**: Alter the playback speed relative to the selected tempo.
- **Play:** The play button can always be used to start and stop pattern playback, regardless of the [Trigger](#) setting.
- **Tempo:** The bottom right section, beside the play button, contains the tempo selector. If [Sync](#) is off, you can click and drag here to set the tempo.

Tempo and Snapshots

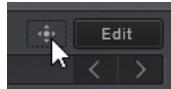
The [Trigger](#) and [Sync](#) settings are not saved with Snapshots, so you can browse Snapshots without losing these settings. The tempo setting is stored in Snapshots, so if Sync is off when you load a Snapshot, the tempo will update to the setting saved in that Snapshot.

All of the Snapshots in this library have been saved with a tempo that best matches the patterns included in the Snapshot.

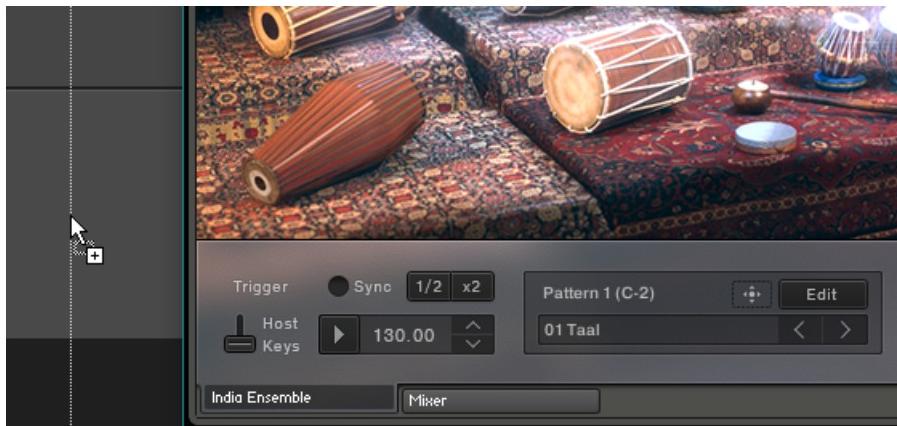
3.4.2 MIDI Export

It is possible to export the selected pattern via drag and drop:

1. Click on the icon to the left of the [Edit](#) button.

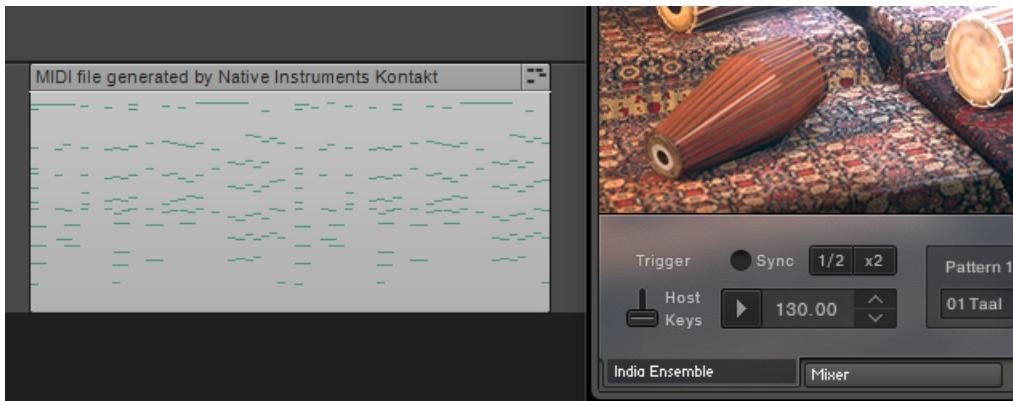


2. While holding down the mouse button, drag the pattern to your file system or DAW.



3. Release the mouse button to copy the MIDI to the specified location.

→ The MIDI file of the selected pattern will appear in your file system or DAW.



Groove, Feel, Intensity, and the solos and mutes are always written into the MIDI file, so the pattern you hear will always be the pattern you export.

3.4.3 Groove and Feel

To the right of the pattern display there are controls that allow you to define the way the selected pattern is played.



The Pattern Groove and Feel Controls of a Percussion Instruments

Two of these options are found here for both the Ensemble and Percussion Instruments:

- **Feel:** Controls the precision of the performance. Settings to the left will be more rigid sounding, and settings to the right will sound more relaxed.
- **Intensity:** Controls the dynamic level of the performance.

The third option is found beside the above controls in the Percussion Instruments, but is located in the ModWheel area in the Ensemble Instrument:

- **Groove:** Controls the complexity of the pattern. At its lowest setting, only the main beats will be heard. At its highest setting, all of the additional embellishments in the pattern will be heard.

The final playback option only applies to the Ensemble Instrument.

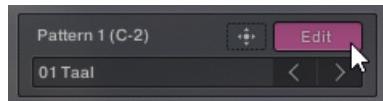


The Pattern Groove and Feel Controls of a the India Ensemble

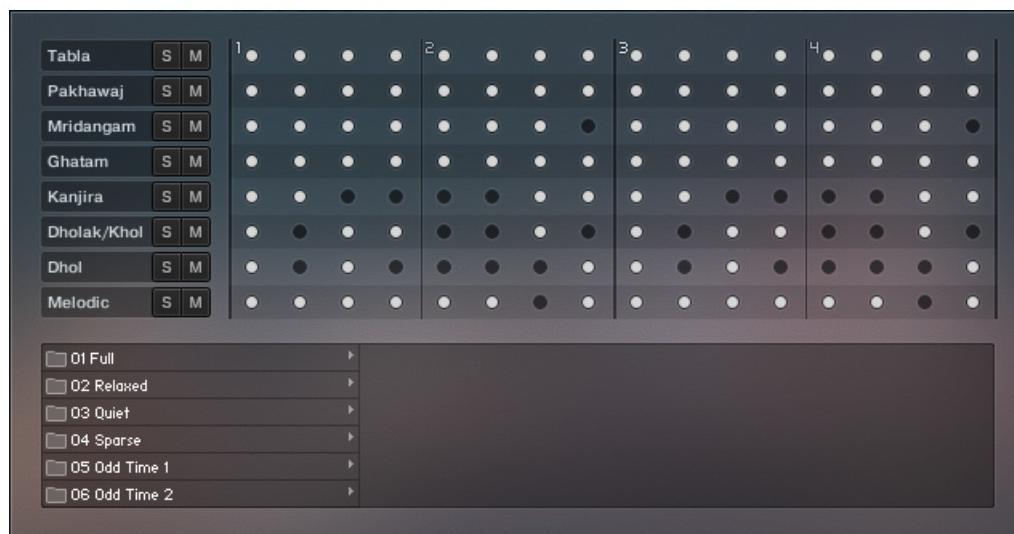
- **Root:** Sets the root note of the pattern. This not only changes the notes played by the melodic instruments, but also changes the percussion to match the key.

3.4.4 Browsing and Editing Patterns

- ▶ Click on the [Edit](#) button in the main pattern display.



→ The Pattern Browser and Editor window will open over the instrument/ensemble picture.



Pattern Browser and Editor of the India Ensemble

Loading Pattern Presets

The lower part of this window is the Pattern Browser. You can use this to browse through an extensive collection of patterns.

To load a pattern:

1. Browse through the folder system until you find the *.mid file you wish to load.

- Double-click on the file name.



→ The pattern will be loaded into the currently selected pattern slot.

There are six variations for each pattern included with the library. Generally the first pattern is the main version, and the patterns get progressively busier with each variation.

Editing Patterns

You can edit the pattern from the upper half of the window, in the Pattern Editor.

The patterns can be quite complex, so for ease of use, their representation has been simplified to a series of dots, each one representing a beat in the pattern.

- If a dot is black, it contains no information.
- If a dot is light grey, it does contain pattern data.
- ▶ Click on a grey dot to deactivate the pattern data for that beat.



- ▶ Click on the dot again to re-activate that data.



- ▶ Whole tracks in the pattern editor can also be soloed and muted by using the S and M buttons respectively.





Note that soloing and muting tracks in the Pattern Editor does not mute any audio, the instruments will still be playable using external MIDI.

Some of the patterns will allow you to edit 8th notes rather than just full beats. You can see the resolution of the Pattern Editor by looking at the note at the top of the Pattern Editor.



The pattern resolution indicator

Snapshots

All of the included patterns have been saved as Snapshots, with different pattern variations assigned to each of the pattern keys.

The Snapshots included with the library are all saved with the tempo that works best with the included patterns.

3.5 Melodic

The Main Instrument Page is the first page you will see when you open any of the Melodic Instruments for the first time.

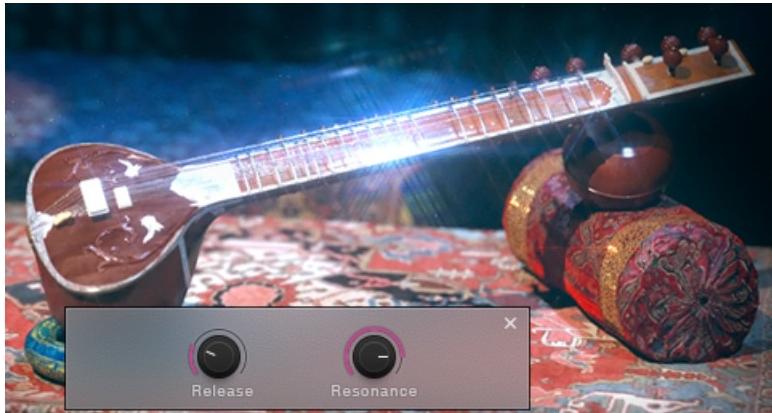


The Melodic Main Page

The main body of this page shows the instrument.

- Click on the instrument to display its options.

- The Instrument Options will appear in a window below the instrument.



The Instrument Options will contain between two and four controls, depending on which instrument you have loaded. These controls will affect the volume levels of certain aspects of the instrument, or somehow influence the playing style.

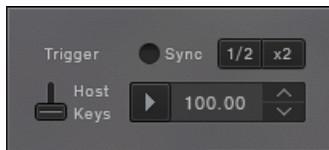


The Bansuri and Santur do not have any Instrument Options, so clicking on the instrument will not reveal any controls.

3.5.1 Drone

All of the Melodic Instruments feature a Tanpura drone, which is a common feature in Indian music. The key of this drone is selected with the Scale controls, which are described in more detail in section [3.5.2, Scales and Mapping](#).

The controls for the drone are located to the bottom left of the Main Instrument Page.



The Drone Controls

There are a number of options available that allow you to tailor how the drone is used:

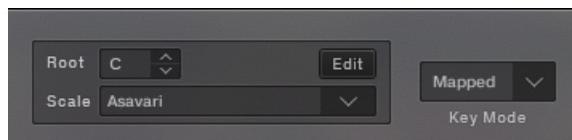
- **Trigger:** Selects between two trigger modes:
 - **Host:** The drone will start when the host transport playback starts, and will end when the host playback ends.
 - **Keys:** The drone is turned on or off manually, using the play button to the right.
- **Sync:** Synchronizes the drone playing with the host tempo.
- **1/2** and **x2:** Alter the playback speed relative to the selected tempo.
- **Tempo:** The bottom right section, beside the play button, contains the tempo selector. If **Sync** is off, you can click and drag here to set the drone tempo.



Ideally, the Tanpura drone should be without rhythm, but by its nature a kind of subtle rhythm is inevitable. Setting the tempo of the drone can have an effect on the overall feel of the music, so if you are using the drone it is worth experimenting with these options.

3.5.2 Scales and Mapping

The main Scale controls are located in the center of the bottom area.



The Scale and Mapping Controls

There are two main scale controls:

- **Root:** Selects the root note of the scale.
- **Scale:** Selects from a list of preset scales.

The way these settings affect your playing is dictated by the setting specified in the **Key Mode** menu:

- **Guide:** The Virtual Keyboard highlights the notes in the selected scale, but your playing is unmodified.

- **Mapped:** Like the Guide setting, but if you play a note outside of the scale, it will be transposed to the next nearest note in the scale.
- **Easy:** Maps the scale to the white keys of the keyboard, so that all scales follow the same mapping.



If you are using a KOMPLETE KONTROL S-SERIES keyboard, the scale settings will be reflected in the Light-Guide.

Browsing Scales

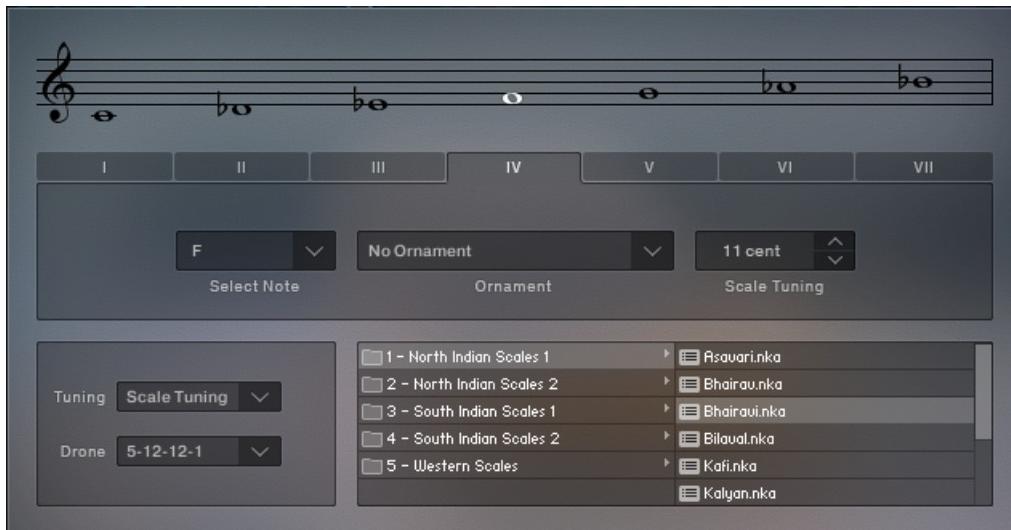
DISCOVERY SERIES: INDIA comes with a large bank of scale presets, only a selection of which are available in the **Scale** menu.

You can customize which scales are available in the **Scale** menu from the Scale Browser.

- Click on the **Edit** button above the **Scale** menu to open the Scale Browser and Editor.



- The Scale Browser and Editor window will open over the instrument's image.



The Scale Browser is located in the lower right side of the window. From this browser, you can view all of the available scales by category.

- Double-click on a scale to load it into the currently selected scale slot in the Scale menu.

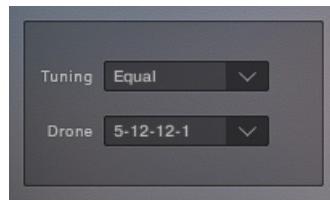


- The newly selected scale will replace the previously selected scale and the mapping will update accordingly.

Customizing Scales

You can also customize the selected scale from the Scale Browser and Editor window.

To the left of the Scale Browser are two quick controls for setting the tuning and drone pattern.



The Tuning and Drone Controls

These are:

- **Tuning:** Selects from three tuning options:
 - *Equal:* Tunes the scale to the Western standard equal temperament. Although this setting is not authentic, it will be in tune with most other keyboard and synthesized sounds.
 - *Just:* A mathematically ideal tuning that will sound best when the instrument is played in the key selected by the Root control.
 - *Scale Tuning:* Tunes the scale according to the settings specified by the scale preset.

- **Drone:** The Tanpura drone can play in two different patterns, which are selected from this menu.

Above these options are a set of controls that allow further customization of the scale.



The Scale Editor

A scale can contain eight notes, and each note has three parameters.

To edit the scale:

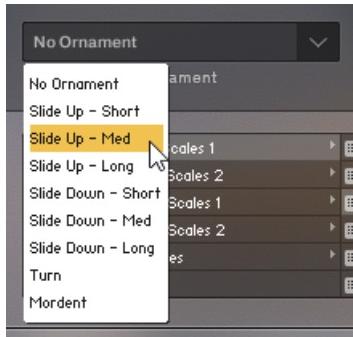
1. Select the note you wish to edit by clicking on the tabs with roman numerals.



2. Specify the western equivalent note by using the **Select Note** menu (the contents of this menu will change according to the **Root** setting).



3. Some Indian ragas or raags contain more than just notes on a scale, but also rules about how each note is played, and even sets of phrases that can be used. To emulate this, you can select an ornament for each note using the [Ornament](#) menu.



4. The note can then be fine-tuned using the [Scale Tuning](#) control (this setting will only be used if [Scale Tuning](#) is selected from the [Tuning](#) menu).



5. Repeat this process until you have finished customizing your scale.
 - The customized scale will automatically be saved over the selected scale in the [Scale](#) menu. However, it will not overwrite the scale preset in the Scale Browser.

3.6 Mixer

The Mixer Page is where you alter the sound of the Instrument by controlling volume levels and effect parameters.



The Mixer Page of the India Ensemble

Although each Instrument will contain different channels in the Mixer, the functionality will remain the same.

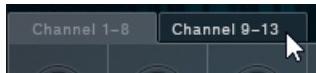
3.6.1 Instrument Channels

The Melodic and Percussion Instruments will have two Instrument Channels, whereas the Ensemble will have 13.

Navigation

For the India Ensemble, the 13 channels are spread over two pages. Navigation for these pages is available as tabs above the main body of the mixer.

- Click on the tabs to change the displayed channels.



Channel Strip



The controls for each of the channel strips are as follows:

- **Send:** Controls the auxiliary send level to the reverb effect.
- **Pan:** Controls the instruments position in the stereo field.
- **S (Solo):** Mutes all the other channels that do not have solo active so that you can hear only a specific selection of instruments.
- **M (Mute):** Mutes the channel so no audio can be heard.
- **Level fader:** Controls the output level.

Effects and Options

- ▶ Click on the channel name to display the effects and options for that channel.



- The channel effects and options will appear below the mixer.



The Channel Effects and Options

There are three effects available for each channel:

- **EQ:** A 4-band fixed EQ. You can set the gain for each band by using the 4 available knobs.
- **Drive:** Controls the saturation amount.
- **Sound:** Morphs between different tone settings.

To the right of the effects is the channel output option:

- **Output:** Sets the output of the selected channel. Routing the channel to anything other than *Default* will cause the channel to bypass the Master Bus effects and settings.



The Output setting is not saved with Snapshots.

3.6.2 Reverb

The Reverb channel is a convolution based reverb effect. It accurately simulates real spaces (or equipment) by using an impulse response sample, which is kind of like a sonic fingerprint.

The Reverb channel lacks the **Send** and **Pan** controls of the instrument channels, but works in the same way in every other regard.

- ▶ Click on the **Reverb** button to display the Reverb selection options.



- The lower section of the Mixer will display a series of images, each representing a different reverb type.



The Reverb Selection Options

For the DISCOVERY SERIES: INDIA library there are five different spaces available.

- ▶ Click on an image to select the respective reverb.



- The reverb character will change to the selected space.

3.6.3 Master

The channel strip on the far right is the Master Bus. It is the final stage of the mixer before the sound reaches the main Instrument output.

Channel Strip

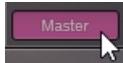


The channel strip has four main controls:

- **Send:** Controls the amount of signal sent from the Master Bus to the Reverb effect.
- **Width:** Controls the stereo width of the Master Bus, i.e. how far to the left or right an instrument can be panned.
- **Stereo Invert:** Activating this button will switch the left and right channels, effectively changing the listener position.
- **Level fader:** Controls the output level.

Master Effects

- Click on the **Master** button to display the Master Effects controls.



→ The lower section of the Mixer will display the Master Effects.



The Master Effects

There are 5 Master Effects:

- **EQ:** A 4-band fixed EQ. You can set the gain for each band by using the 4 available knobs.
- **Ambience:** Controls the level of a very small reverb effect, this can be used to add distance to the sound but without making it sound like it is in as large a space as the Reverb effect.
- **Punch:** Turning this knob to the right will emphasize the transient peaks in the sound, making it more percussive and punchy.
- **Comp:** Controls the amount of compression applied to the Master Bus.
- **Tape:** Controls the amount of Tape saturation applied to the Master Bus.

4 Credits

Produced by Native Instruments

Product Design and Concept: Nikolas Jeroma

User Interface Design: Simon Martin, Efflam Le Bivic, Fabian Ruf

KSP and Kontakt Programming: Nikolas Jeroma

MIDI Groove Programming: Ricky Kej, Timo Preece, Thomas Seher, Akash Dey

Sound Design: Sebastian Müller, Tommaso de Donatis

Sample Editing: Antonio de Spirt, Carlos Ruiz

Sample Recording: Native Instruments

Quality Assurance: Bymski

Product Management: Christian Wachsmuth, Tobias Menguser

Marketing Manager: Tom Evans

Artwork: Nancy Bienhold, Yvonne Hartmann